

RocketLinx® ES8508F-S-XT

Part Number: 32011-1 (Single-Mode)

RocketLinx® ES8508F-M-XT

Part Number: 32012-8 (Multi-Mode)



KEY FEATURES AND BENEFITS::

- Six 10/100BASE-TX and two SC fiber ports (2KM or 30KM)
- EN50121-4 EMC and IEC 61373 vibration standards for railway applications
- Advanced Layer 2 features including: VLAN, Private VLAN, QinQ, GVRP, QoS, IGMP Snooping V1/V2/V3, rate control, port trunking, LACP, and online multiport mirroring
- 32Gbps non-blocking, 8K MAC address table
- RSTP, MSTP and redundant ring support with sub 5ms ring recovery
- Management via Web, PortVision® DX, SNMP, Telnet, and Serial Console
- Modbus TCP/IP support for participation on industrial Ethernet networks
- Hardware watchdog timer for system reset and recovery
- Configurable multi-event alarm output
- IP31 rated rugged aluminum housing with DIN rail mounting
- Dual 10-60VDC redundant power inputs
- Wide operating temperature (-40° to 75°C)
- IPv6 support
- RoHS2 compliance under CE
- NEMA TS2 certified

PRODUCT DESCRIPTION::

The RocketLinx ES8508F-XT is an industrial-grade managed 8-port switch with built-in fiber ports that features advanced Layer 2 management, security, and system reliability for deployment in extreme and mission critical networking applications.

The ES8508F-XT design incorporates the latest managed switch technologies to ensure reliable, high-bandwidth data

communications including a 32Gbps switch fabric for real-time non-blocking data transmission, redundant network topology supporting ring, RSTP and MSTP, and a high performance ARM9 processor with an embedded hardware watchdog timer. These features combined with a rugged IP-31 grade housing and extended operating temperature guarantee performance and stability for traffic, rail, and other demanding applications.





ROCKETLINX SPECIFICATIONS ::

HARDWARE

Network Interface

10/100BASE-TX,100BASE-FX Single and Multi-Mode Connector Type

Duplex SC

Enclosure

IP31 grade aluminum metal case Drop-waterproof and dustproof

Installation Method DIN rail LED Indicators

Power 1, power 2, system status ring, digital input, digital output RJ45 link/activity

Digital Input (DI)
One DI. 4-pin screw terminal block

Digital Output (DO)

One DO (dry relay output), 4-pin screw terminal block

Serial Console Port

One RJ45 RS-232 (TXD, RXD, signal GND), baud rate: 9600bps, data bits: 8, parity: none, stop bits: 1,

flow control: none

Dimensions 5.2" x 5.9" x 2.15" 132 x 150 x 55 mm **Product Weight**

2 lbs .91 kg

ETHERNET SPECIFICATIONS

Number of Ports

6 - 10/100BASF-TX

2 - 100BASE-FX (Single and Multi-Mode)

RJ45 (Standard)

10/100BASE-TX, auto MDI/MDIX, auto-negotiation (speed/duplex mode)

Cable Types

Cat 3, Cat 4, Cat 5, Cat 5e (UTP or STP)

Optical Fiber

Fiber Cable Type (Single-Mode) 8-10/125um Fiber Cable Type (Multi-Mode) 50-62.5/125um 1310nm Wavelength

Transmit Power (Min) -15dBm (Single-Mode) -20dBm (Multi-Mode) -8dBm (Single-Mode) -14dBm (Multi-Mode) Transmit Power (Max) -34dBm (Single-Mode) Receive Sensitivity (Min) -31dBm (Multi-Mode)

Receive Sensitivity (Max) 0dBm

19dB (Single-Mode) Link Budget 11dB (Multi-Mode)

Link Distance

100 meters RJ45 Fiber 30KM (Single-Mode) 2KM (Multi-Mode)

Port Alarm Relay

Standards

IEEE802.1AB: Link Layer Discovery Protocol (LLDP)

IEEE802.1D-2004: Rapid Spanning Tree Protocol (RSTP)

IEEE802.1p: Class of Service

IEEE802.1Q VLAN Tagging and GVRP IEEE802.1s: Multiple Spanning Tree Protocol (MSTP)

IEEE802.1x: Port Based Network Access Control

IEEE802.3:10BASE-T

IEEE802.3ad: Link Aggregation Control Protocol (LACP)
IEEE802.3u:100BASE-TX

IEEE802.3x: Flow Control and Back-Pressure

IEEE1588: Precision Time Protocol (PTP)

Internet Protocol

IPv4 and IPv6

MANAGEMENT FEATURES

Configuration Management

Out-band management: console port with command line interface (CLI) - similar to Cisco CLI, in-band management: web interface (HTTP/HTTPS) or a telnet/SSH console with CLI

Embedded Watchdog

Embedded hardware watchdog timer automatically resets system if switch system failure occurs

System Upgrade/Backup

Provides TFTP/web interface for firmware upgrade and configuration backup/restore

V1, V2c, V3 with SNMP trap function, up to four trap stations

SNMP MIB

MIB-II, bridge MIB, VLAN MIB, IGMP MIB, ethernet-like MIB, control private MIB, and RMON

Email Warning

Automatic warning, up to four accounts by pre-defined events System Log

Supports both local mode and server mode DHCP

DHCP client, DHCP server with IP and MAC address binding and DHCP agent (option 82)

NETWORK PERFORMANCE

Back-Pressure
IEEE 802.3x 10/100Mbps half-duplex only

Class of Service (CoS)

IEEE 802.1p 4 priority queues/port

Flow Control Pause Frame

IEEE 802.3x 10/100Mbps full-duplex

IGMP Snooping

V1/V2 /V3 for multicast filtering and IGMP query V1/ V2; supports unknown multicasting, processes forwarding policies: drop, flooding and forward to router port, 256 IGMP multicast groups

IP Security

Assign authorized IP addresses to specific port,

10 max/port

Time Synchronization

Supports IEEE 1588 (precision time protocol), NTP protocol with daylight saving function, and localized time sync function

Port Configuration

Port link speed, link node, port status, enable/disable

Port Mirroring

Online traffic monitoring on multiple selected ports

Port Security

Assign authorized MAC addresses to apecific aort, 10 max/port

Port Trunk

IEEE 802.3ad LACP with timer and static port trunk; Trunk member up to 4 ports and maximum 4 trunk groups

Port-Based Network Access Control

IEEE 802.1x, supports user authentication by the RADIUS account, password and key for the RADIUS servers (primary and secondary)

Private VLAN

Direct client ports in isolated/community VLAN to

promiscuous port in primary VLAN

Ingress filtering for broadcast, multicast, unknown DA or all packets. Egress filtering for all packet types

Switch Technology
32Gbps switch fabric, store/forward switch technology, 8K MAC address

System Throughput

26 mega packets/second, 64 byte packet size, 14,880pps (10Mbps); 148,800pps (100Mbps) Transfer Packet Size 64 bytes to 1522 bytes (includes 1522 bytes VLAN tag)

Packet Buffer

1MBits shared memory

Traffic Prioritization (QoS)

Supports 4 physical queues, weighted round robin queuing (WRR 8:4:2:1) and strict priority scheme, which follows 802.1p COS tag and IPv4 ToS/ diffserv information to prioritize industrial network traffic

VLAN

IEEE 802.1Q tag VLAN with 256 (Max) VLAN entries and 2K GVRP entries; 3 VLAN link modes: trunk, hybrid, and link access

Modbus TCP/IP

Supports Modbus TCP/IP communications with function code 4 for factory automation through the CLI, operates as slave/server device, while a typical master/client device is a host computer running appropriate through Ethernet, thus the Modbus TCP/IP master can read or write to the Modbus registers provided by the Modbus TCP/IP. Application software (SCADA / HMI System)

NETWORK REDUNDANCY Rapid Spanning Tree Protocol

IEEE 802.1D-2004 Rapid Spanning Tree Protocol (RSTP) Compatible with legacy STP and IEEE 802.1

Multiple Spanning Tree Protocol

IEEE 802.1s MSTP, each MSTP instance can include one or more VLANS and supports multiple RSTP deployed in a VLAN or multiple VLANs

Redundant Ring Technology

Failure Recovery within 5ms Rapid Dual Homing: Multiple Uplink Paths to Upper Switches Ring Trunking: Integrates Port Aggregate Function in Ring Path to Get Higher Throughput Ring Architecture Multiple Ring: Couple or Multiples of Up to 16 Rapid Super Rings, Supports Up to 4 Fast Ethernet Rings/Switch

ELECTRICAL SPECIFICATIONS

Device DC Input Voltage

(Positive or Negative) 10 - 60VDC Current Consumption (24VDC) 625mA Power Consumption (Max) 15W Number of Power Connectors

4-Pin Screw Terminal Block Power Connector Type Power Innut Redundancy **Dual Redundant Inputs**

Yes

Reverse Polarity Protection 1 with Photo Optical Isolation Digital Input Logic Low (0) 0 to 10VDC

Logic High (1 11 to 30VDC Digital Output (Relay Output) 24VDC DC Input Voltage

Current Consumption (24VDC) 1A Maximum Multi-Event Relay Feature

Power, Port Link, DI/Ring Status Change, Ping Reset, or

Perform Routing Relay On/Off Function

ENVIRONMENTAL SPECIFICATIONS

Air Temperature

System On -40° to 75°C System Off -40° to 75°C

Operating Humidity

(Non-condensing) 5% to 95% MTRF (Mean Time Between Failures) 75.4 years

EXPORT INFORMATION

Packaged Shipping Weight 2.9 lbs 1.32 kg Package Dimensions 10" x 8.4" x 4.2"

254 x 213 x 107 mm **UPC** Code Single-Mode 7-56727-32011-1

Multi-Mode 7-56727-32012-8 **ECCN** 5A991 Schedule B Number 8517.62.0050

REGULATORY STANDARDS

Emission

Canadian EMC Requirements

ICES-003

European Standard EN55022 CISPR 22

FCC Part 15 Subpart B Class A Limit

Heavy Industrial

IEC 1000-6-4/EN61000-4-9: Pulse Magnetic Field

Immunity

Heavy Industrial IEC/EN 61000-6-2: IEC 1000-4-2/EN61000-4-2: ESD

IEC 1000-4-3/EN61000-4-3: RF

IEC 1000-4-4/EN61000-4-4: Fast Transient/ Burst

IEC 1000-4-5/EN61000-4-5: Surge IEC 1000-4-6/EN61000-4-6: Conducted Disturbance

IEC 1000-4-8/EN61000-4-8: Magnetic Field Railway EMC

EN 50121-4: Signaling and Telecommunications Apparatus EN 50121-1: Rolling Stock. Train and Complete Vehicle

AC 1.5KV for all ports and power

Other Regulatory Approvals Traffic NEMA TS2 Certified Railway Vibration/Shock:

IEC 61373 Free Fall with Package: IEC 60068-2-32 RoHS2 compliant



Warranty Information

Comtrol offers a 30-day satisfaction guarantee and 5-year limited warranty.

Sales Support

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